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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,744	10/23/2003	Richard E. Kessler	200301781-2	8266

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EXAMINER	
PUENTE, EMERSON C	
ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/691,744	KESSLER ET AL.	
	Examiner	Art Unit	
	Emerson C Puente	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-10 and 14-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-10 and 14-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *10/23/03* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

This action is made Non-Final. Claims 1,5-10, and 14-24 have been examined.

Claim Objection

Claim 6 is objected to because of the following informalities:

In regards to claim 6, the phrase "said inter-processor connection" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-10, and 14-18 are rejected under 35 U.S.C. §**102(b)** as being clearly anticipated by US Patent No. 5,867,501 of Horst et al. referred hereinafter "Horst".

In regards to claim 1, Horst discloses a multi-processor computer system, comprising:

a plurality of processors coupled together to permit messages to be transmit from on processor to another processor (see figure 1B items 10A and 10B).

each processor having at least one timer that expires when message is not sent from the processor in a predetermined amount of time (see column 29 lines 10-14).

wherein each processor can send a plurality of different message types to other of said processors and each such other processor includes a separate timer associated with each of said message types to expire when a message of the associated message type is not sent from the processor in a predetermined amount of time (see column 29 lines 10-16).

In regards to claims 5, Horst discloses at least one register associated with each timer to permit the timer to be programmed (see column 28 line 65 to column 29 line 3).

In regards to claim 6, Horst discloses wherein each processor has at least one port connection to another processor and wherein each processor further includes a port timer associated with said inter-processor port connection (see figure 1A, 1B, and 1C and column 12 lines 16-65, column 29 lines 6-8).

In regards to claim 7, Horst discloses wherein each port timer increments if the associated port is being used to send messages. Horst indicates begin marking a timeout period within which a response should be received (see column 29 lines 1-3).

In regards to claim 8, Horst discloses wherein the port timer is reset when a message is sent from the port (see column 29 lines 8-9).

In regards to claim 9, Horst discloses wherein the port timer is reset when a message is sent from the port that indicated that the receiving processor has freed up an entry in an input buffer. Horst discloses in every initiation of a transmission, a timer is reset (see column 29 lines 5-6). Each reset of a timer means that a previous transactions has been completed, indicating entry in the buffer would have to be freed up. If the transaction had not completed, then the reset would not of occurred.

In regards to claim 10, Horst discloses a processor that can be coupled to other processors to form a multiprocessor system and can exchange messages with the other processor in the system, the processor comprising:

router logic that can be coupled to at least one other processor (see figure 1B item 14A, 14B);

said router logic having at least one timer that expires when a message is not sent from the processor in a predetermined amount of time (see column 29 lines 10-14);

wherein each processor can send a plurality of different message types to other of said processors and each such other processor includes a separate timer associated with each of said message types to expire when a message of the associated message type is not sent from the processor in a predetermined amount of time (see column 29 lines 10-16).

In regards to claims 14, Horst discloses at least one register associated with each timer to permit the timer to be programmed (see column 28 line 65 to column 29 line 3).

In regards to claim 15, Horst discloses wherein each processor has at least one port connection to another processor and wherein each processor further includes a port timer associated with said inter-processor port connection (see figure 1A, 1B, and 1C and column 12 lines 16 to 65, column 29 lines 6-8).

In regards to claim 16, Horst discloses wherein each port timer increments if the associated port is being used to send messages. Horst indicates begin marking a timeout period within which a response should be received (see column 29 lines 1-3).

In regards to claim 17, Horst discloses wherein the port timer is reset when a message is sent from the port (see column 29 lines 8-9).

In regards to claim 18, Horst discloses wherein the port timer is reset when a message is sent from the port that indicated that the receiving processor has freed up an entry in an input buffer. Horst discloses in every initiation of a transmission, a timer is reset (see column 29 lines 8-9). Each reset of a timer means that an previous transactions has been completed, indicating entry in the buffer would have to be freed up. If the transaction had not completed, then the reset would not of occurred.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19-24 are rejected under 35 U.S.C. § **103(a)** as being unpatentable over Horst in further view of US Patent No. 5,924,119 of Sindhu et al. referred hereinafter "Sindhu".

In regards to claim 19, Horst discloses a method of monitoring a computer for traffic congestion, comprising:

starting a timer on the occurrence of a first predetermined event (see column 29 lines 1-3);

resetting the timer on the occurrence of a second predetermined event (see column 29 lines 8-9); and

Horst further discloses when the timer is not reset and the timer expires, a timeout signal is sent to notify the processor of an absence of a response to a particular transaction (see column 29 lines 10-13). However, Horst fails to disclose blocking further messages from being sent by a processor.

Sindhu discloses blocking further messages from being sent by a processor. Sindhu states, "to prevent congestion, there is a second flow control mechanism that may be invoked by any client device to demand a system-wide hold of the arbitrator. A demand for system wide hold temporary disables the arbiter from granting the bus for the transmission of request packets" (see column 9 lines 8-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Horst to block further message sent by the processor if the timer is not reset and timer expires. A person of ordinary skill would have been motivated to modify the teaching of Horst because Horst discloses buffering of packets to be transmitted (see column 20 line 64-65) and blocking further messages sent by the processor would prevent congestion by stopping continued buffering of packet to be transmitted, as per teaching of Sinhu (see column 9 lines 8-20).

In regards to claim 20, Horst discloses programming of timer (see column 28 line 65 to column 29 line 3).

In regards to claim 21, Horst discloses wherein the first predetermined event is a buffer having at least one message in it. Horst discloses the packet transmitter buffering information received until they can be transmitted (see column 20 lines 64-65) and further discloses when data is sent to the packet transmitter, it will set a request timer, causing the request timer to begin marking a timeout period.

In regards to claim 22, Horst discloses wherein said second predetermined event is a message being sent from one processor to another (see column 29 lines 8-9).

In regards to claim 23, Horst discloses a method of isolating failures in a multiprocessor system, comprising:

programming the system to have at least one partition selected from the group consisting of: hard partition, firm partition, semi-hard partition, and soft partition (see figure 1B and 1C and column 14 lines 10-50).

detecting a failure in the system. Horst discloses when the response is not received within the timeout, the request timer will notify the processor of the absence of a response to a particular transaction (see column 29 lines 7-10).

Furthermore, Horst discloses request timers, which begins marking a timeout period within which a response should be received, indicating using of timers to monitor the system for messages.

However, Horst fails to disclose:

blocking messages from being sent from one processor to another processor upon detecting said failure;

using timers to monitor the system for messages that are unable to be completed due to blocked messages;

Sindhu discloses blocking further messages from being sent by a processor to prevent congestion. Sindhu states "to prevent congestion, there is a second flow control mechanism that may be invoked by any client device to demand a system-wide hold of the arbitrator. A demand for system wide hold temporary disables the arbiter from granting the bus for the transmission of request packets" (see column 9 lines 8-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Horst to block messages from being sent from one processor to another processor upon detecting said failure and use the timer to monitor the system for messages that are unable to be completed due to blocked messages. A person of ordinary skill would have been motivated to modify the teaching of Horst because Horst discloses buffering of packets to be transmitted (see column 20 line 64-65) and blocking further messages sent by the processor, as per teaching of Sinhu, would prevent congestion by stopping continued buffering of packet to be transmitted.

In regards to claim 24, Horst discloses individually programming a plurality of timers, each timer associated with a different message type (see column 29 lines 10-16).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C Puente whose telephone number is (571) 272-3652. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ECP
12/23/04

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